
MAGNUM OPUS[®]

ALL-CHINA VACUUM TOILET

OWNER'S MANUAL

3000 Series VacuFlush[®] Toilets



WARNING

This manual must be read and understood before installation, adjustment, service, or maintenance is performed. Modification of this product can result in property damage.



Dometic[®]



Dometic Corporation • Sanitation Systems

13128 State Rt 226, PO Box 38

Big Prairie, OH 44611

SeaLand Product Customer Service: 1-800-321-9886

(8:00 a.m. - 5:00 p.m. ET)

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WARNING – ELECTRICAL SYSTEM.

Turn off electrical power before servicing.



WARNING – MOTOR STARTS AUTOMATICALLY.

Turn off electrical power before servicing.

CAUTION – System may contain vacuum after shut-down.

Read and understand the complete contents of this manual before operating or servicing the sanitation system. Failure to follow any precautions may result in damage to the sanitation system.

TOILET MODEL IDENTIFICATION

The model identification label is located on the inside wall of the toilet under the tank access lid. It will show the model number and serial number. If label is not available, please refer to “Dimensions” (page 21) for toilet model identification.

DOMETIC CORPORATION

P.O. BOX 38, 13128 STATE RT 226 (800) 321-9886
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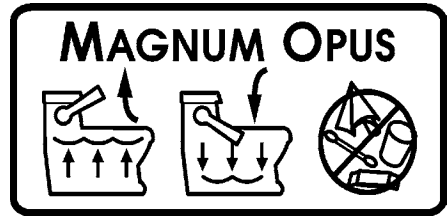
MODEL NO. **000**
SERIAL NUMBER

000000

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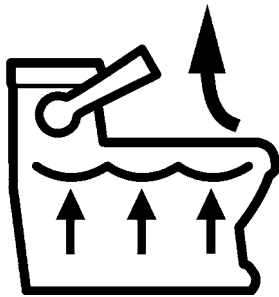
IMPORTANT INFORMATION BEFORE OPERATION

1. Fill freshwater tank and add deodorant to holding tank through toilet bowl.
2. Make sure all guests understand the operation of the toilet system and the flushing instruction label is easy for guests to read. **This label is located under the seat, and is easily read when the seat is raised.**
3. Remember the vacuum pump starts automatically. Shut off the toilet system before servicing and do not leave the boat with toilet system breaker on.
4. **Never use drain openers, alcohol, solvents, etc. in the system.**
5. If the system does not function properly, refer to the Troubleshooting section of this manual and repair as necessary. If problem persists, contact your local SeaLand dealer or see the Customer Service section of this manual.

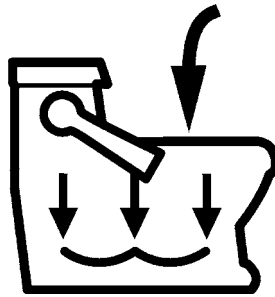


FLUSH and FORGET® OPERATION

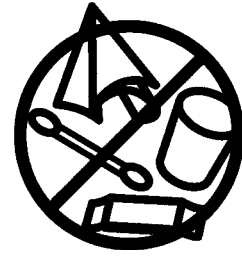
1. To add water to the toilet before using (if necessary), raise flush handle until desired water level is reached. (Water flow will stop automatically after a period of time).



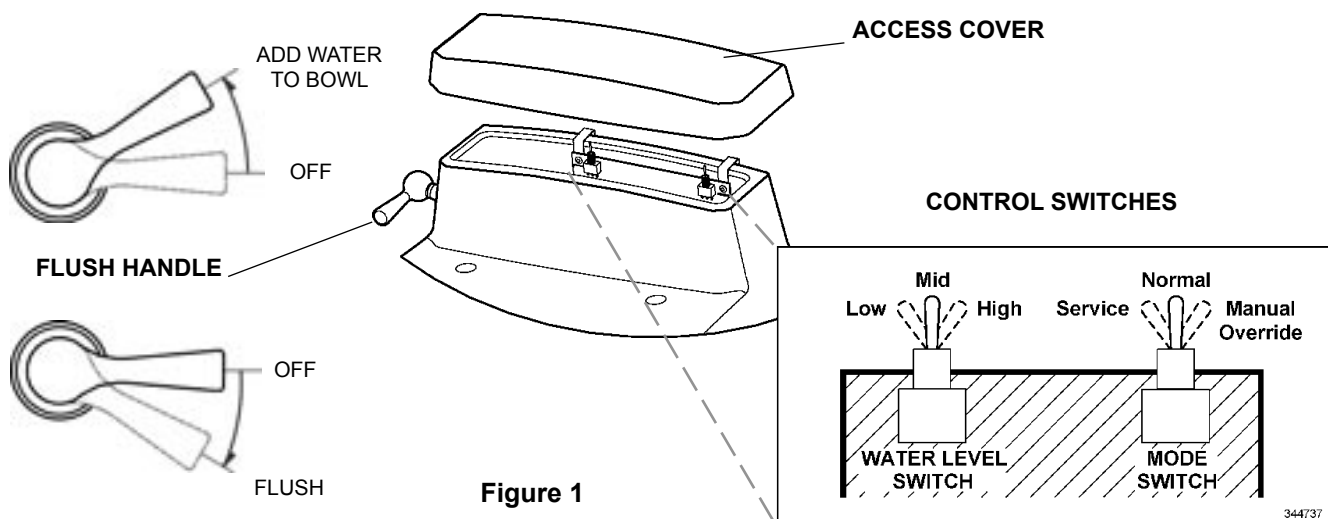
2. To flush toilet, press flush handle down. Water will flow into bowl for two seconds, then flush ball will open. Toilet will not flush again until "OK to Flush" light is on.



3. Do not dispose of sanitary napkins or other non-dissolving items in toilet, such as facial tissue or paper towels. These items can cause plugging of the sanitation system.



TOILET CONTROLS



OPERATING INSTRUCTIONS

1. Adding More Water To Toilet Bowl

Raise the flush handle until the desired water level is attained. To prevent overflowing the toilet, a timer inside the control module limits the amount of water that can be added.

2. Flushing The Toilet

When the vacuum status panel's green "OK to Flush" light is on, and the red "Do Not Flush" light is off, push the handle down for a moment then release it. Holding the handle down will not prolong the flush cycle nor start a new flush cycle. The handle must be allowed to return to the "off" position and the vacuum must be allowed to recharge before another flush cycle can be initiated. A full holding tank will also prevent the toilet from flushing.

3. Selecting Automatic Water Refill Levels:

The Water Level switch is located under the access cover. Carefully lift up on the front of the cover to access the Water Level switch. There are three water refill levels available. The microprocessor-controlled water valve will refill the toilet bowl according to your water level selection.

To reinstall the access cover, set the cover on top of the toilet and press down. This will lock the cover in place and prevent it from coming loose during travel.

LOW Level

Use this setting to conserve water. This position may be desirable to reduce the chance of water splashing out of the bowl during rough travel. If more water is needed for flushing, lift up on the flush handle. Water flow will stop after nine seconds to prevent overflow.

MID Level

Use this position to keep the toilet bowl clean, especially when family and friends may be using the toilet. If more water is still needed for flushing, raising the flush handle will provide up to six seconds of additional water refill time.

HIGH Level

Use this position if the MID level does not provide a clean toilet bowl. This position is not recommended while underway. If more water is still desirable for flushing, raising the flush handle will provide up to three seconds of additional water refill time.

4. Mode Switch

The Mode switch is located on the right side of the control module. It lets you switch between three function settings:

NORMAL

Use this setting for flushing the toilet.

SERVICE

Use this position for cleaning the toilet bowl and flush ball seal. The flush ball will open automatically and remain open in this position. Lifting up the flush handle provides water.

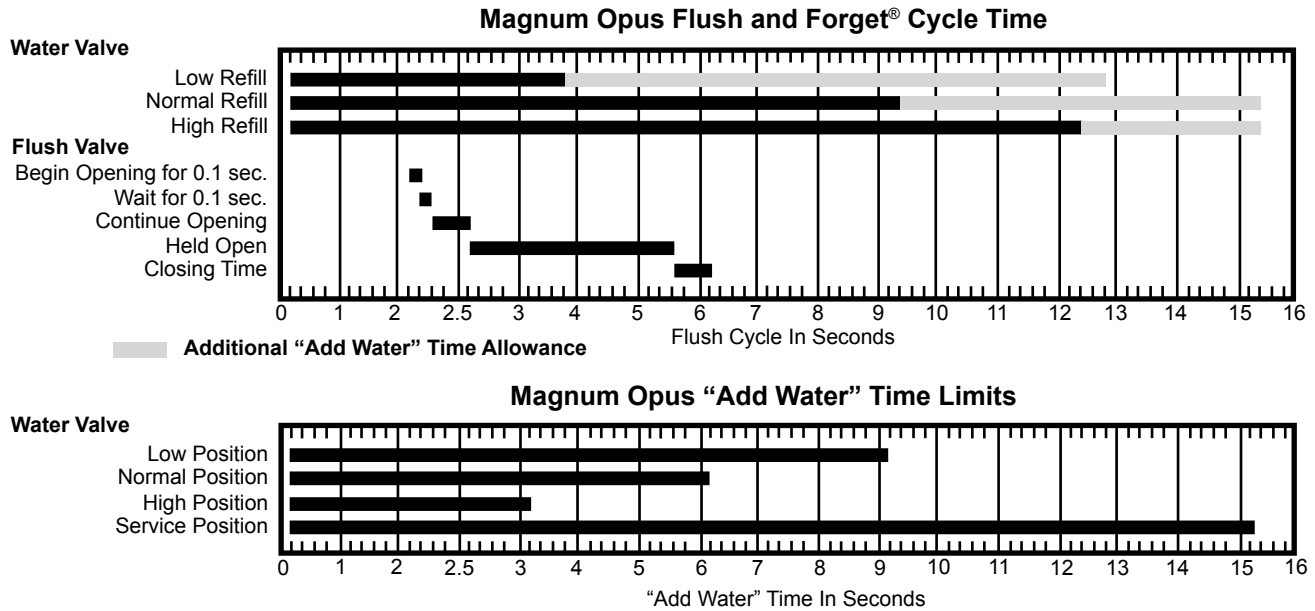
MANUAL OVERRIDE

Use this position to flush the toilet manually in the event of power or battery failure. This switch disconnects the electronic brake in the flush valve motor, and allows manual flushing via the override access hole in the side of the vitreous china base.

Note: The control module allows 15 seconds of water for cleaning. If more water is required, return the switch to the NORMAL position then back to the SERVICE position.

A safety circuit in the control module monitors flush ball operation. If foreign objects or low voltage prevent the flush ball from closing, this circuit prevents personal injury or damage to the flush valve motor. If this condition occurs, reset the control module by placing the Mode switch into the SERVICE position temporarily, then returning it to the NORMAL position.

FLUSH OPERATION TIMING CHART



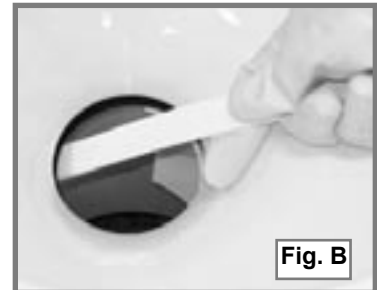
PROPER CLEANING – TOILET BOWL AND SEAL

The Magnum Opus toilet should be cleaned regularly for maximum sanitation and operational efficiency. You can clean it just as you would a household toilet. **Do not use caustic chemicals, such as drain-opening types, as they will damage the seals.**

BOWL CLEANING: For stubborn stains, use SeaLand Bowl and Seal Cleaner (Fig. A). It's manufactured especially for use with our Magnum Opus toilets. In certain locations where water is hard, a build-up of lime may dull the toilet bowl finish. Restore the shine with this cleaner. If you cannot find our brand in your area, contact SeaLand Product Customer Service for your nearest dealer. If it is not available, you can also use Bar Keepers Friend® cleanser. It is not necessary to vigorously scrub with either product. Please follow label instructions.

SEAL CLEANING: After an extended time, mineral deposits from hard water can build up under the edge of the rubber bowl seal, resulting in a slow leakdown of water from the bowl. To prevent this mineral build-up, periodically clean under the bowl seal with SeaLand Bowl and Seal Cleaner (Fig. B).

1. Put Mode switch in SERVICE position. Flush ball will open automatically.
2. Apply cleanser onto the seal cleaning tool (supplied with new toilet), and scrub under the seal. Make sure to push bristles between bottom of seal and top of flush ball surface to scrub all parts of seal that come into contact with flush ball.
3. Wait 2-3 minutes.
4. Pull up on flush handle to let water flow into bowl. Use cleaning tool and water to rinse away cleanser and loosened deposits. You can add water for up to 15 seconds in the SERVICE position.
5. Put Mode switch in NORMAL position. Water will flow for a few seconds, then flush ball will close automatically. Water will continue flowing into bowl, making it ready for the next flush.



WINTERIZING

At the end of each season, the Magnum Opus toilet system must be winterized for storage. The following procedure should be used:

1. Pump out holding tank.
2. Thoroughly flush system with fresh water.
3. Drain freshwater tank.
4. Add freshwater antifreeze to freshwater tank.
5. Flush freshwater antifreeze and water mixture through toilet and into the waste holding tank. Each installation is different so amounts may vary. User discretion is required to assure adequate protection.
6. Turn off electrical power.

CAUTION: The use of freshwater antifreeze that contains alcohol will result in damage to your sanitation system. Only use propylene glycol freshwater antifreeze that **does not contain alcohol**.

MAINTENANCE SCHEDULE

Maintenance intervals and normal parts replacement vary widely depending on numerous factors such as frequency of system use, quality of flushing water, etc. The following chart is intended strictly as a general guide in keeping the sanitation system 100% ready for any conditions of use.

Maintenance Procedure	Recommended Date of Service	Parts Required
ROUTINE MAINTENANCE		
Toilet flush ball seal cleaning	Monthly	SeaLand Bowl and Seal Cleaner
Tighten toilet seat mounting hardware	Monthly (or as needed)	N/A
MAJOR SYSTEM MAINTENANCE		
Replace duckbill valves in Vacuum Pump or Vacuum Generator	Every three years	Duckbill Valve Kit
Replace flush ball seal and flush ball (if needed)	Every three years	Flush Ball Seal Flush Ball

SPARE PARTS

It is recommended that the following parts be kept available at all times:

Description	Part Number	Quantity	Where Used
Flush Ball Seal	see parts list	1	Magnum Opus Toilet
Flush Ball	see parts list	1	
Water Valve	see parts list	1	
Vacuum Breaker Kit	see parts list	1	
Vacuum Switch Kit	see parts list	1	Vacuum Generating System
1.5-inch Duckbill Valve Kit (2 ea. per kit)	see parts list	1	

ORDERING PARTS

Dometic is ready to assist you in the event service is required. Before calling, please have the following information available. Your cooperation in having this information ready is appreciated and allows us to better meet your needs. Please refer to the Parts Distributor list in the Customer Service section.

1. Toilet Model Number
2. Serial Number
3. Part Number, Description and Quantity (see parts list insert)

SANITATION SYSTEM COMPONENTS

Vacuum Toilet: The Magnum Opus vacuum toilet with *Flush and Forget*® technology operates differently compared to other toilets. The vacuum system uses a small amount of water (a little more than a pint or .5 liter) per flush in addition to a simple vacuum. The toilet is connected to a pressurized freshwater system. Fresh water is the key to an **odor-free bathroom compartment**. Magnum Opus toilets are equipped with an integral vacuum breaker which prevents the possible contamination of the freshwater supply. Special *HushFlush*™ seat provides ultra-quiet flush when closed.

Vacuum Generator: The vacuum generator combines the Vacuum Tank and Vacuum Pump in one unit. It greatly reduces installation time and eliminates the hose run between the tank and pump. Their compact size makes them especially well-suited to smaller installation spaces.

Vacuum Tank: The vacuum tank stores vacuum energy. System vacuum level is monitored by a vacuum switch located on the vacuum tank. When this switch senses a drop in vacuum in the system, it automatically signals the pump to energize and bring the vacuum to operating level. This process is normally completed in less than one minute.

Vacuum Pump: The vacuum pump is an electric, straight-through bellows type. It is manufactured of long-lasting polypropylene and draws only 4 to 6 amps of current at 12 VDC. This unique pump design is both an efficient air and liquid pump that handles solids without a problem. It has two duckbill valves on each side of the pump chamber to maintain vacuum and prevent backflow of waste.

“Tank Full” Shut-Down Switches (RV option only): These “Tank Full” micro-float switches shut down the vacuum generator when the waste holding tank is full. We offer three styles to accommodate various installation requirements.

Sealing Grommet style – Item number 900101

MPT style – Item number 900100

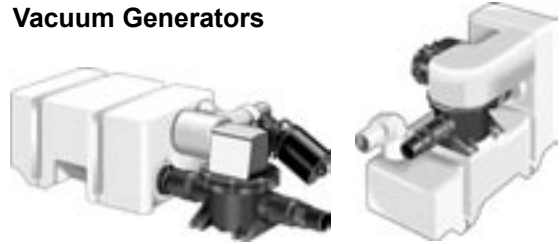
Vent style – Item number 900102

TankWatch® Level Indicator (marine option only): The TankWatch unit utilizes micro-float switches which activate an indicator panel. The inspection cap in the holding tank contains the micro-float switch units. The adjustable probe assemblies are flexible polybutylene tubing and are designed to flex when tank contents move.

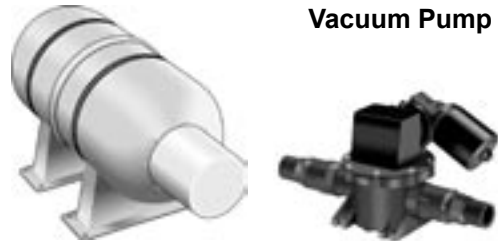
**Magnum
Opus®
Vacuum
Toilet**



Vacuum Generators



**Vacuum Tank and
Vacuum Pump**



**“Tank Full”
Shut-Down
Switches**



**Uniseal
style**

**MPT
style**

**Vent
style**

**TankWatch
Panel and
Probes**



SANITATION SYSTEM COMPONENTS (cont'd)

Magnum Opus VacuStat™ Indicator Panel: A desirable accessory for vacuum sanitation systems, this panel continuously monitors the status of vacuum for proper toilet operation. Brushed metallic finish complements bathroom decor. Item number 700112 (12VDC).

Vacuum Status Panel (optional): A two-light status panel indicates the system is “OK to Flush” or “Do Not Flush”. The green “OK to Flush” light is illuminated when there is adequate vacuum pressure available and when the holding tank is less than full. Item number 710012.

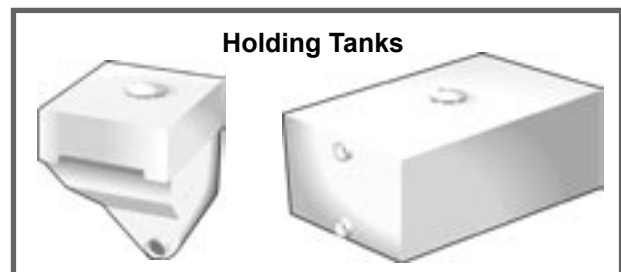
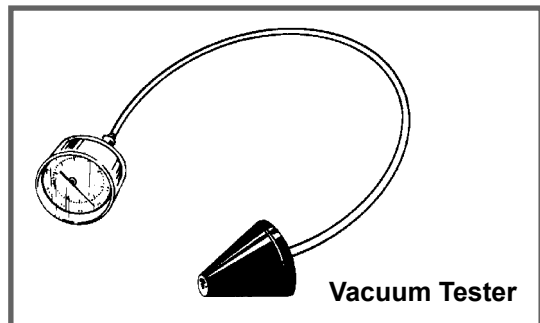
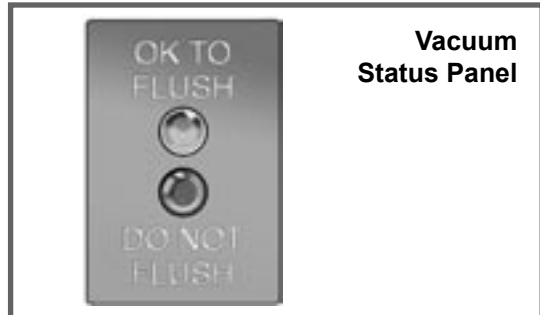
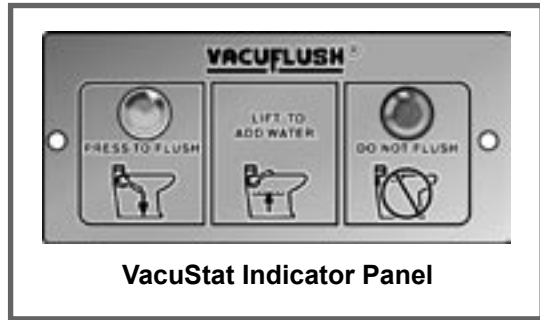
VacuFlush Status Panel (optional – not shown): Includes two-light status panel indicating the system is “OK to Flush” or “Do Not Flush”, and circuit breaker to shut down system at night. Item number 500012 (12 VDC) or 500024 (24 VDC).

Vacuum Generator Shut-down Relay (standard on RVs; marine option): This relay can automatically shut down power to the Magnum Opus vacuum toilet system to prevent overfilling of the holding tank. Item number 310289 (12 VDC) or 310290 (24 VDC).

Vacuum Tester (optional): This tool assists in identifying the location of vacuum leaks. The vacuum tester consists of a vacuum gauge and a cone-shaped plug. Inserting the plug in the inlet of the vacuum tank or vacuum generator isolates the toilet from the system. In this way, a vacuum leak can easily be located in either system. Item number 530002.

Holding Tanks (marine option only): SeaLand holding tanks are made of super-strong, 3/8” (10mm) thick polyethylene — 50% thicker than most other holding tanks. Each unit has a solid, one-piece construction with no seams for unmatched durability. A deodorant additive is required to keep the holding tank odor-free. See Deodorants and Special Tissue section for further information.

In-Line Vent Filter (optional): The SaniGard™ vent filter has special odor-removing filter materials to help keep your vehicle smelling clean and pleasant. Heavier-than-air malodors accumulate in the holding tank. This vent filter has a special type of activated filter media to remove these odors before they offend. Each cartridge is good for an entire season, and is easily replaced for a fresh start. Replacement cartridges are available.



DEODORANTS AND SPECIAL TISSUE

Your Magnum Opus toilet and sanitation system require the regular addition of a deodorant product to reduce mal-odors and to help break down holding tank contents. Several factors should be considered in selecting a deodorant product.

Liquid or Dry: Liquid products obviously work more quickly by readily going into solution. Granulated powder formulations, on the other hand, have the advantage of requiring less storage space and are less likely to leak if the package is inadvertently damaged.

Formaldehyde versus Non-Formaldehyde: Dometic manufactures both types of deodorants. Generally speaking, formaldehyde formulas control odor very effectively at all temperatures and with all degrees of water hardness. SeaLand® Environment-Friendly brand, which is formaldehyde free, is similarly effective.

How Much Deodorant and How to Add It: The deodorant is added directly into the toilet bowl, then flushed into the holding tank. Follow bottle or package instructions. Conditions of extremely warm weather, longer waste holding time and larger tank capacities may require more deodorant treatment. Also, to maintain optimum efficiency in odor control, the waste holding tank should be cleaned thoroughly at least once or more each season, depending on use.

Why Not Use Household Toilet Paper in Your Magnum Opus Toilet? Household tissues often contain adhesives which bond together the paper fibers from which the tissue is made. The adhesives prevent the tissue from breaking apart, and their use in “ultra-low flow” systems can cause system clogging. SeaLand tissue is especially designed for use in low water toilet systems. Its rapid dissolving properties minimize the amount of residual paper in the holding tank and allow deodorizers to work more efficiently.

SeaLand versus Other Brands: SeaLand constantly strives to provide our system owners with effective products that have minimal environmental impact and good value. Many deodorant products do not measure up to our standards of performance and value.

SeaLand® Granulated Deodorant

Six 2-oz. pouches



Part No.
379626002

SeaLand® Liquid Deodorant

Two 8-oz. bottles

Part No.
379224008



SeaLand® Liquid Deodorant - Environment Friendly

32-oz. bottle

Part No.
379114032



SeaLand® Cleaner

16-oz. bottle

Part No.
379314016



SeaLand® Rapid-Dissolving Toilet Tissue

Four 400-sheet rolls

Part No. 379441204

MARINE SANITATION REGULATIONS

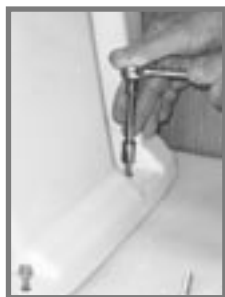
All boats with fixed toilets in U.S. waters and in the waters of some other countries are required to be equipped with an operable marine sanitation device (MSD). The Magnum Opus vacuum sanitation system, when installed in a boat, is a holding tank or Type III system as defined by the U.S. Coast Guard. Type III systems are designed to permit operation of the toilet without the direct discharge of untreated waste after every flush. This means onboard toilet facilities can be used when the boat is near swimmers, beaches or shellfish beds.

Type III systems can be discharged at marina dockside pump-out stations or, if in coastal waters, a minimum of three miles offshore. **Overboard discharge capability must remain secured while within the three-mile limit.** The overboard discharge pump is activated by a keyed switch located in the toilet compartment. **This key should be removed at all times except when discharge pump is operating.**

Sewage from any source should not be discharged directly into our waters. If you are interested in learning more about this issue, please contact Dometic at the phone number or address listed on the back page of this manual.

FLUSH MECHANISM COMPONENTS

1. To access base assembly components, remove decorative screw caps and unscrew four bolts that hold china toilet to floor.



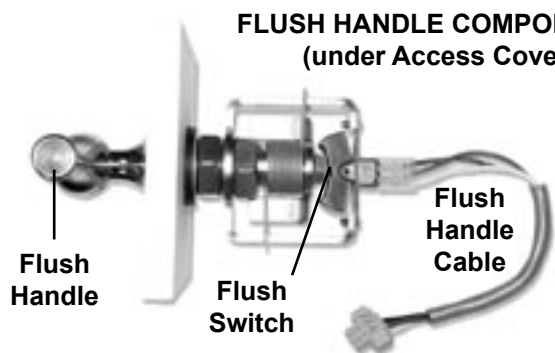
2. Remove access cover. Lift up control module. Disconnect power cable and vacuum control cable from control module.

Do not disconnect flush handle cable or base assembly cable.

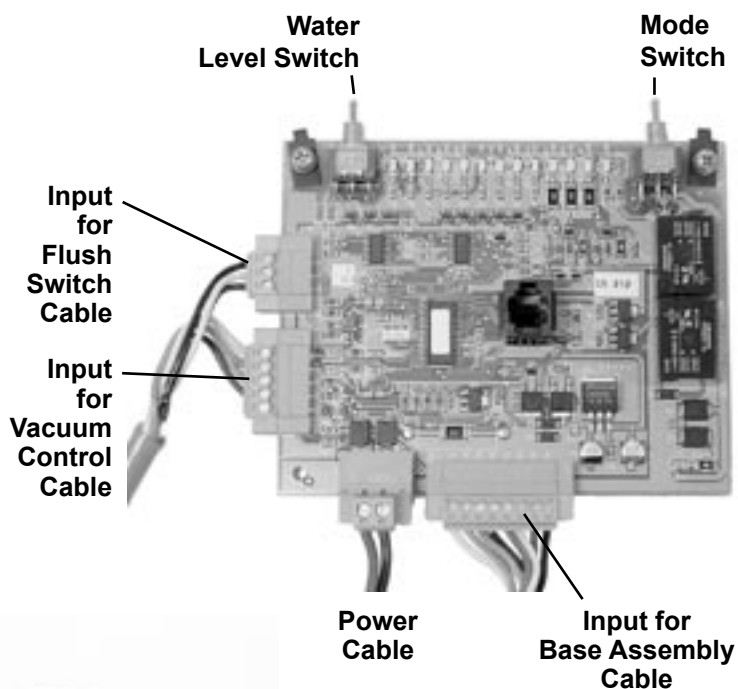
3. Lift china toilet straight up and set it down close to front of floor flange/adaptor assembly. Turn off water to toilet and disconnect flexible water line at rear of base assembly. The toilet is completely disconnected.



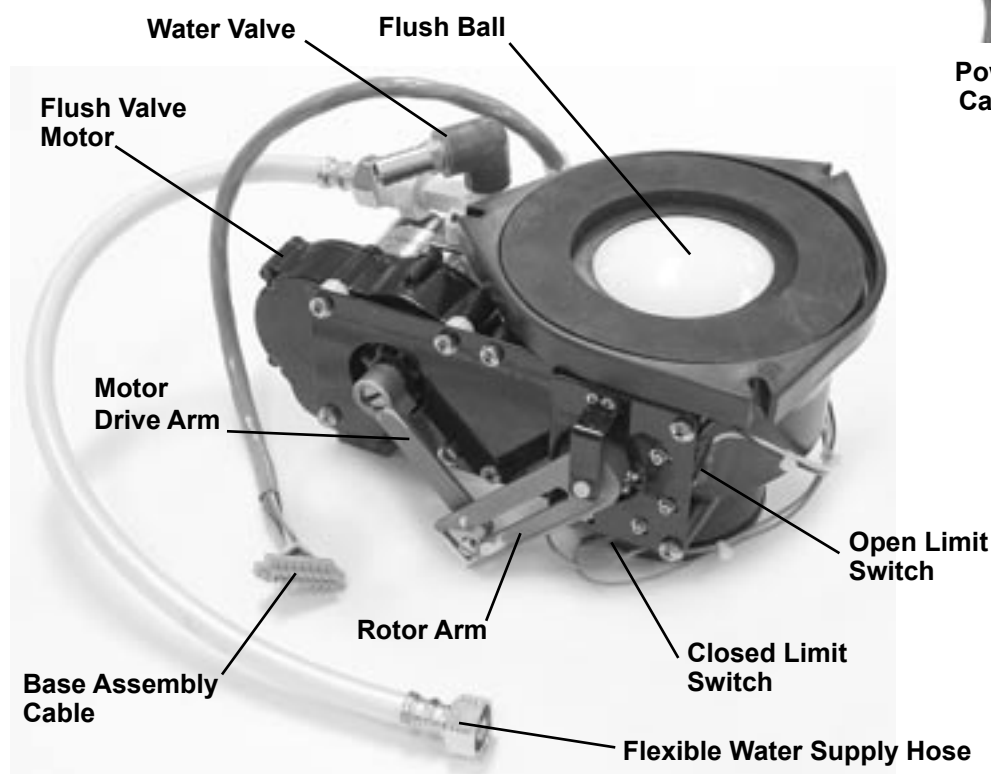
FLUSH HANDLE COMPONENTS (under Access Cover)



CONTROL MODULE



BASE ASSEMBLY COMPONENTS (under china toilet)



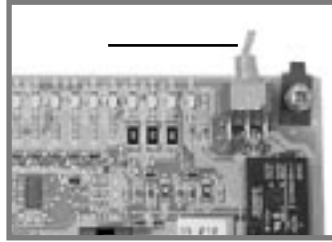
Discharge Adapter



MANUAL FLUSH OPERATION

In the event of an electrical failure, the flush ball can be manually operated to clear the bowl. We recommend using a long-neck screwdriver or 7/16-in. socket for the operation shown below. **NEVER PRY OPEN THE FLUSH BALL FROM INSIDE THE TOILET BOWL.** Damage to the flush ball and bowl seals may result.

1. Remove PC board access cover. Place Mode Switch in the "Manual Override" position. This disconnects flush valve motor brake from electrical circuit.



2. Locate hole on left side of china toilet. This allows access to the flush valve motor drive arm.



3. Insert screwdriver or 7/16-in. socket through access hole and onto hex head.



4. Turn screwdriver or socket **counter-clockwise**. This will open flush ball and allow bowl contents to clear. After bowl is clear, turn screwdriver or socket clockwise to return flush ball to original position.

NOTES:

Water will not enter the toilet bowl during manual flush operation.

Place Mode Switch in the "Normal" position before returning to automatic operation.

TOILET SYSTEM ELECTRICAL SPECIFICATIONS

	<u>12VDC</u>	<u>24VDC</u>
Maximum standby current (amps):	.080	.080
Maximum operating current (amps):	6.5	2.5
Flush motor locked rotor current (amps):	14.5	7.25
Maximum voltage	15	30
Minimum voltage:	10	20
Input power wire size	14 ga.	14 ga.
All other wires size:	18 ga.	18 ga.
Fuse size (amps)	8	4

NOTES: Standby current includes flush panel status light.

Operating current does not include vacuum pump or other sanitation system components.

TROUBLESHOOTING

A volt/ohmmeter (VOM) and the Toilet Wiring Diagram may be required for this section.

Caution: Portions of this section will require that power be applied to the toilet. Keep hands away from the flush ball, motor drive arm and rotor shaft to prevent personal injury during testing and troubleshooting.

The control module uses a microprocessor to provide all the automatic and timing functions. The control module is on the right side under the access cover on the top of the toilet. The control module has input and output status lights that can be used in troubleshooting the toilet.

The program in the microprocessor monitors the input and output signals during a normal flush cycle. If the inputs or outputs do not follow the commands of the program, then the microprocessor may go into a "standby" mode and flash an "error code." The microprocessor is reset by placing the Mode switch in the SERVICE position temporarily, then returning the switch to the NORMAL position.

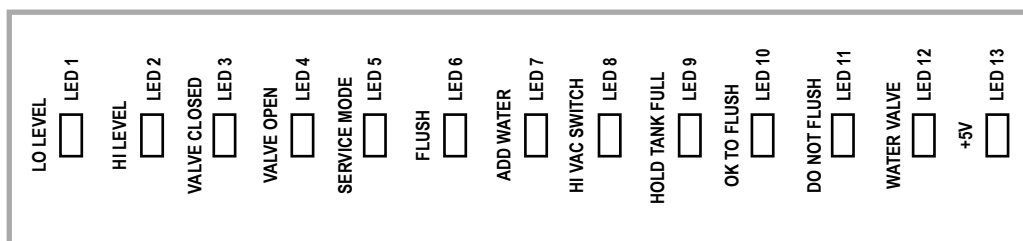
A safety circuit in the control module monitors flush ball operation. If foreign objects or low voltage prevent the flush ball from closing, this circuit prevents personal injury or damage to the flush valve motor. If this condition occurs, reset the control module by placing the Mode switch into the SERVICE position temporarily, then returning it to the NORMAL position.

Status Light	Function
1 Low Level	Water Level Switch in "Low" position.
2 High Level	Water Level Switch in "High" position.
3 Valve Closed	Flush valve Closed Limit Switch engaged.
4 Valve Open	Flush valve Open Limit Switch engaged.
5 Service Mode	Mode Switch in "Service" position.
6 Flush	Flush Switch on control panel engaged.
7 Add Water	Add Water Switch on control panel engaged.
8 High Vac Switch	High vacuum in system (allows toilet to flush).
9 Holding Tank Full	Full holding tank (prevents toilet from flushing).
10 OK to Flush	Signal to "OK TO FLUSH" light on control panel.
11 Do Not Flush	Signal to "DO NOT FLUSH" light on control panel.
12 Water Valve	Electric water valve energized.
13 +5V	Input power present.

ERROR CODES

Status Light	No. of Flashes	Pause	Condition
10 OK to Flush	1	.5 sec.	Mode Switch in SERVICE position
11 Do Not Flush	1	2 sec.	VALVE OPEN Limit Switch problem
11 Do Not Flush	2	2 sec.	VALVE CLOSED Limit Switch problem
11 Do Not Flush	3	2 sec.	Insufficient vacuum in system
11 Do Not Flush	4	2 sec.	Flush valve motor relay failure

CONTROL MODULE STATUS LIGHTS



TROUBLESHOOTING (cont'd)

ERROR CODE CORRECTIVE PROCEDURES

Condition

Corrective Action

Mode Switch in SERVICE position.

Return Mode Switch to NORMAL position.

Valve Open Limit Switch problem.

With the flush valve fully open, check the "VALVE OPEN" status light. If the light is **off**, then the Valve Open Limit Switch is out of alignment or defective, or related wiring is defective.

Valve Closed Limit Switch problem.

With flush valve in the fully closed position check the "VALVE CLOSED" status light. If the light is **off**, then the Valve Closed Limit Switch is out of alignment or defective, or related wiring is defective.

Insufficient vacuum in system.



Check the "HI VAC" status light. If the light is **off**, the signal from the vacuum switch located on the vacuum generator or vacuum tank is absent and preventing the toilet from flushing in the NORMAL mode. Check for loss of power to the vacuum generator or vacuum pump. Check for loose or defective wiring between the vacuum switch and the toilet.

Flush valve motor relay failure.



Replace control module.

TOILET OPERATION

SYMPTOM 1. Toilet will not flush and water will not enter toilet bowl.

Condition

Corrective Action

+5V status light is **off** (on far right of control module):



- Check toilet fuse or circuit breaker at DC distribution panel.
- Check for loose or defective wiring between control module and DC distribution panel.
- Check for reverse polarity of input power to control module.
- If all of above check OK, replace control module.

+5V status light is **on**:



- Input power must be 10 volts or higher.
- Check control module for error codes.
- Check "HI VAC" status light. If light is **off**, vacuum is low, preventing the toilet from flushing.
- Check "HOLD TANK FULL" status light. If light is **on**, black water holding tank is full, preventing toilet from flushing.
- Put Mode Switch in SERVICE position. If flush valve **opens**, go to next step. If the flush valve **does not open**, go to Symptom 2.
- Put the Mode Switch in NORMAL position and push flush handle down while observing "FLUSH" status light. The "FLUSH" status light must come **on** when the handle is pressed and go **off** when the handle is released. If the "FLUSH" status light **did not** follow commands of handle, then flush switch or related wiring is defective.

SYMPTOM 2. Flush valve will not open when the Mode Switch is in the SERVICE position or when the flush handle is pushed while in the NORMAL position.

Procedure

Check the voltage output to the flush valve motor at jack 6, pins 9 and 10 on the control module as follows:



Corrective Action

- Pull the control module out as far as the control cables will allow. Locate jack 6 at the bottom of the control module.
- Remove the purple wire from pin 6.
- With DC voltmeter test leads across pins 9 and 10, flip the Mode Switch between the NORMAL and SERVICE positions. If voltage is present for about two seconds in the SERVICE position, the flush valve motor or related wiring is defective. If voltage is not present, replace the control module.

TROUBLESHOOTING (cont'd)

SYMPTOM 3. Flush valve will not close.

Condition/Procedure

Mode Switch is in SERVICE position:

Foreign object prevents the flush valve from closing and the safety circuit locked flush valve in open position:

Check for error code at "DO NOT FLUSH" status light.

Check the voltage output to the flush valve motor at jack 6, pins 9 and 10 on the control module as follows:



Corrective Action

- Return switch to the "Normal" position.
- Reset the control circuit by putting the Mode Switch in the SERVICE position temporarily, then returning to the NORMAL position. If the flush valve **did not** close, go to next step.
- If showing error, follow the instructions in the Error Code Corrective Procedures section.
- Pull the control module out as far as the control cables will allow. Locate jack 6 at the bottom of the control module.
- Remove the green wire from pin 5.
- With DC voltmeter test leads across pins 9 and 10, flip the Mode Switch between the SERVICE and NORMAL positions. If voltage is present for about two seconds in the NORMAL position, the flush valve motor or related wiring is defective.
- If voltage is not present, replace the control module.

SYMPTOM 4. Water will not enter toilet bowl during a flush and when the flush handle is raised

Procedure

Place the Water Level switch in the LOW position. Check the "WATER VALVE" status light while pressing the flush handle down:



Corrective Action

- If the "WATER VALVE" status light comes on, the water valve filter screen may be plugged with debris, or the water valve or its related wiring is defective.
- If the "WATER VALVE" status light remains off, replace the control module.
- If voltage is not present, replace the control module.

SYMPTOM 5. Water will not enter toilet bowl when the flush handle is raised in the "Add Water" position.

Procedure

Flush the toilet, then place the Water Level switch in the LOW position. Then check the "LO LEVEL" status light while raising the flush handle:



Corrective Action

- If the "LO LEVEL" status light comes **on**, replace the control module.
- If the "LO LEVEL" status light does **not** come on, the flush switch or its related wiring is defective.

SYMPTOM 6. Water Level switch has no effect on water level in the "Low" or High" position.



Corrective Action

- Replace control module.

SYMPTOM 7. Flush valve will not open when Mode Switch is in the "Service" position but opens during a normal flush cycle.



Corrective Action

- Replace control module.

TROUBLESHOOTING (cont'd)

SYMPTOM 8. Water will not stay in bowl and system loses vacuum.

Condition/Procedure

Put Mode Switch in "Service" Position:

Worn or damaged flush valve ball and seal:

Corrective Action

- Clean underside of flush valve ball seal of dirt and debris.
- Remove toilet from floor and remove base assembly from toilet and replace flush valve ball and seals.

SYMPTOM 9. Water will not shut off and overflows the toilet.

Procedure

Check the "WATER VALVE" status light:



Corrective Action

- If the light is **on** when **not** flushing the toilet or adding water, replace the control module. If the light responds correctly, go to next step.
- Dirt or debris lodged in the water valve seal. Remove the toilet from the floor, disassemble and clean water valve.
- Replace water valve.

SYMPTOM 10. Water is leaking from under the toilet.

Procedure

Remove the toilet from the floor and inspect the following with both water and electrical power applied:
(place a container under the base assembly to catch any water during the inspection procedure)



- Water hoses and fittings, water valve assembly
- China toilet bowl
- Upper base seal
- Flush valve ball rotor shaft
- Base assembly

SYMPTOM 11. System leaks vacuum, but water remains in toilet bowl.

Procedure

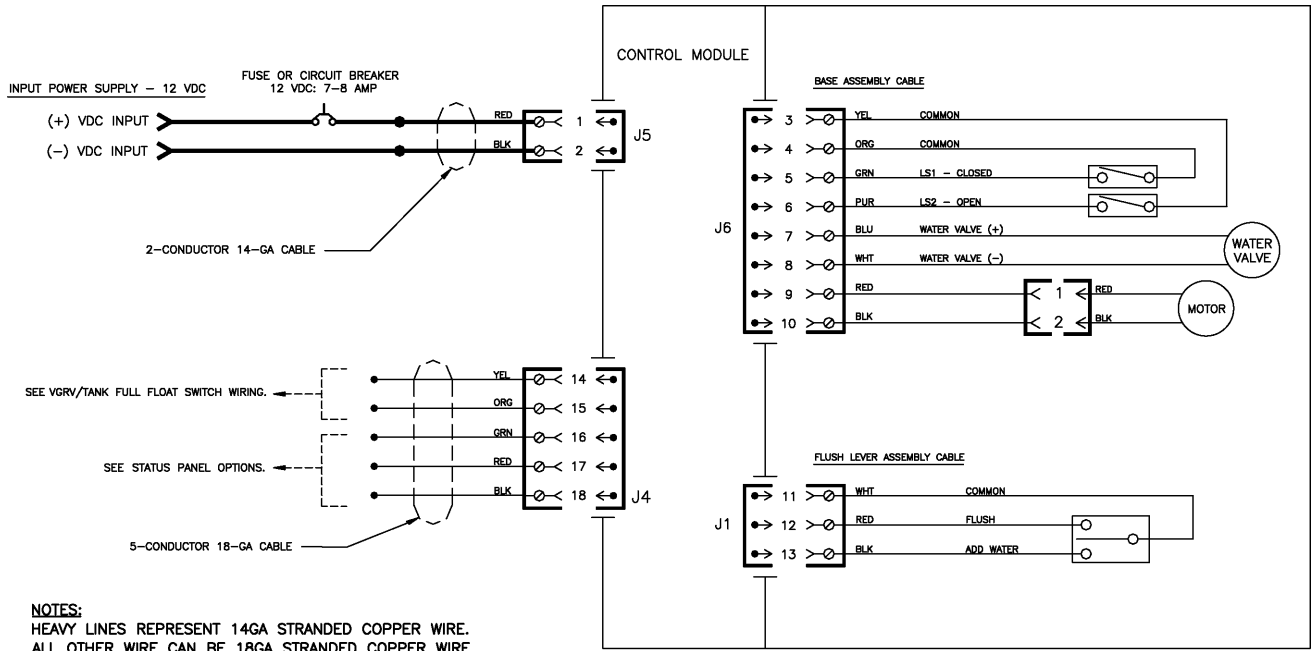
Remove the toilet from the floor and insert a plug or vacuum tester into the discharge port of the floor flange or discharge adapter:

Corrective Action

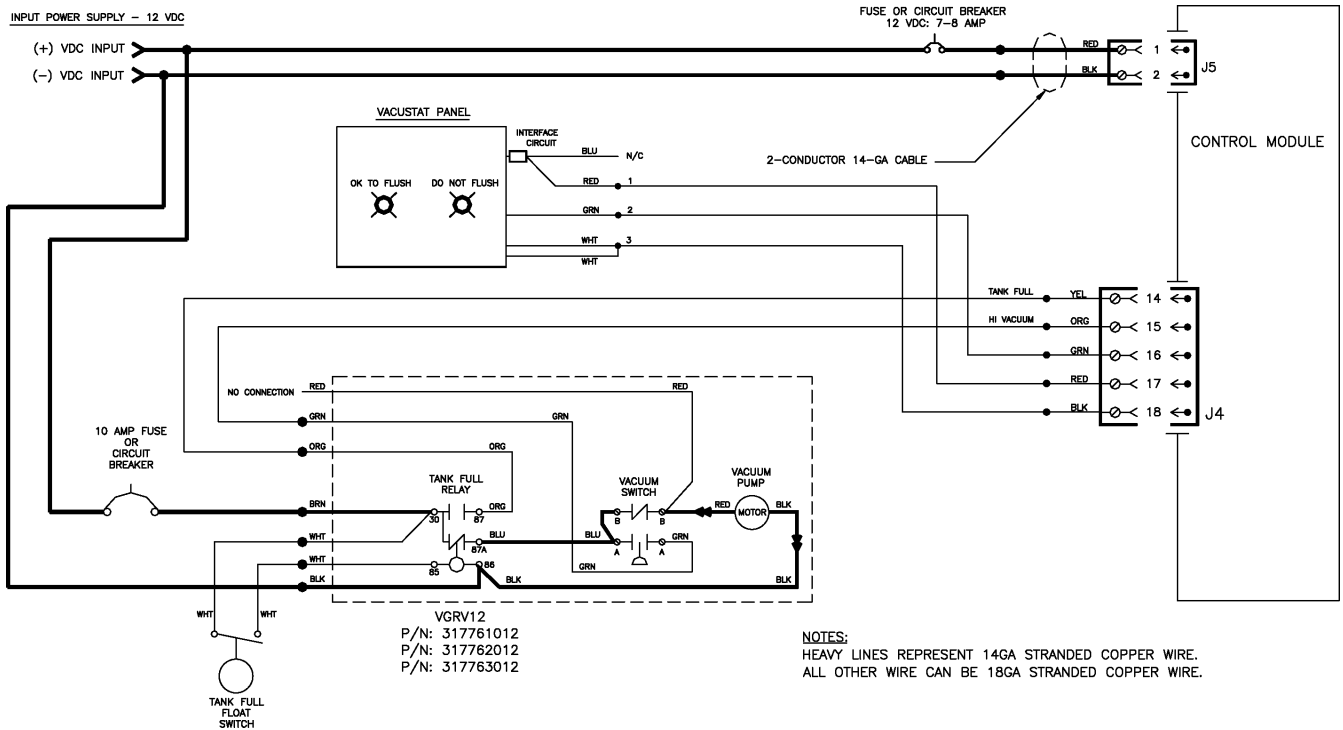
- If the vacuum leaks stops, go to the next step. If the vacuum leak continues, the leak is in the discharge plumbing and not the toilet.
- Inspect the O-ring around the bottom of the base. Replace if defective.
- Inspect the inside surface of the discharge adapter or floor flange for grooves or scratches that may interfere with the O-ring seal. Replace if defective.
- If all of above appear normal, then the leak is most likely the rotor shaft O-rings. Replace the rotor shaft.

RV WIRING DIAGRAMS

RV TOILET DIAGRAM

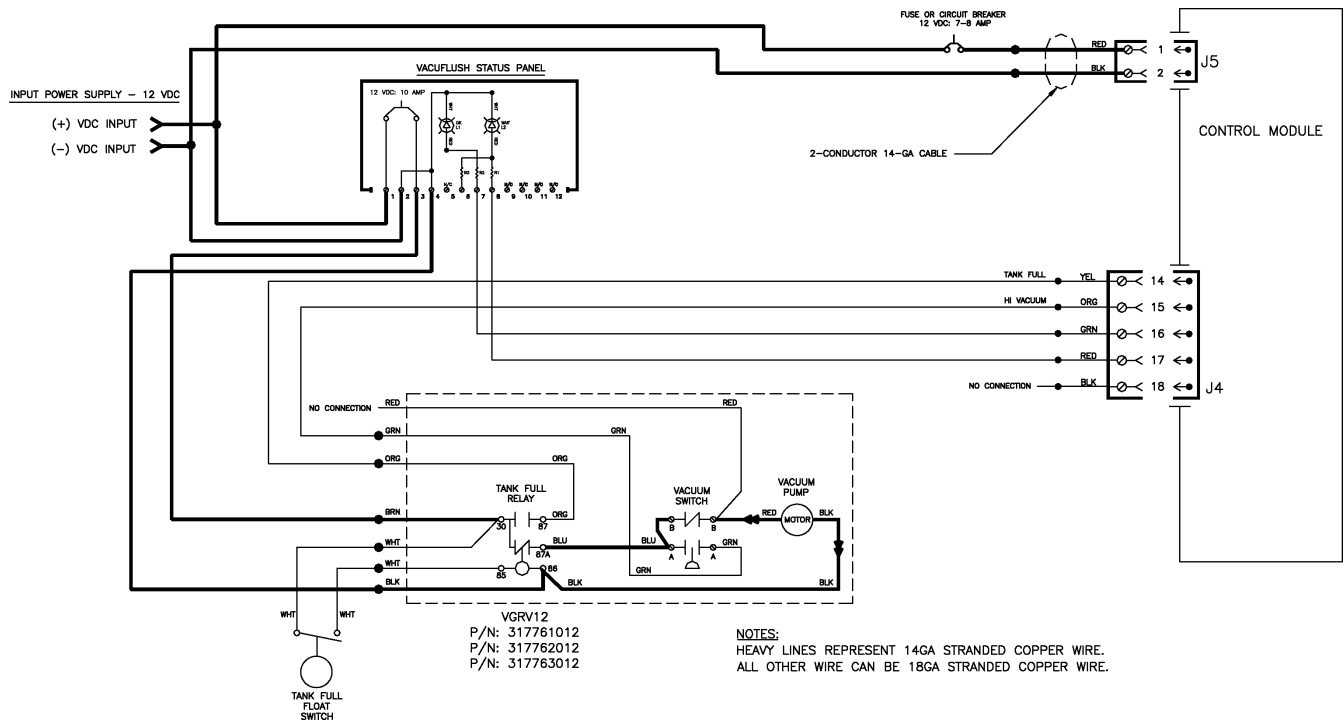


RV VACUSTAT PANEL OPTION



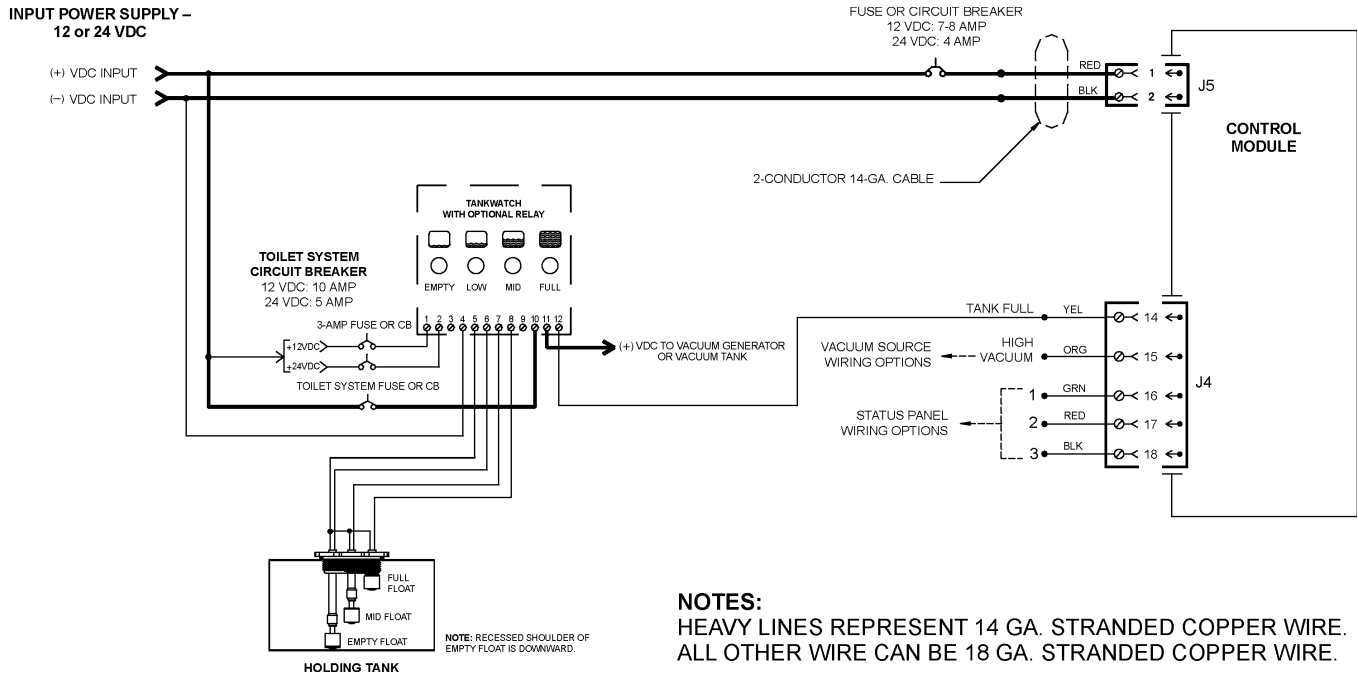
RV WIRING DIAGRAMS (cont'd)

RV VACUFLUSH STATUS PANEL OPTION

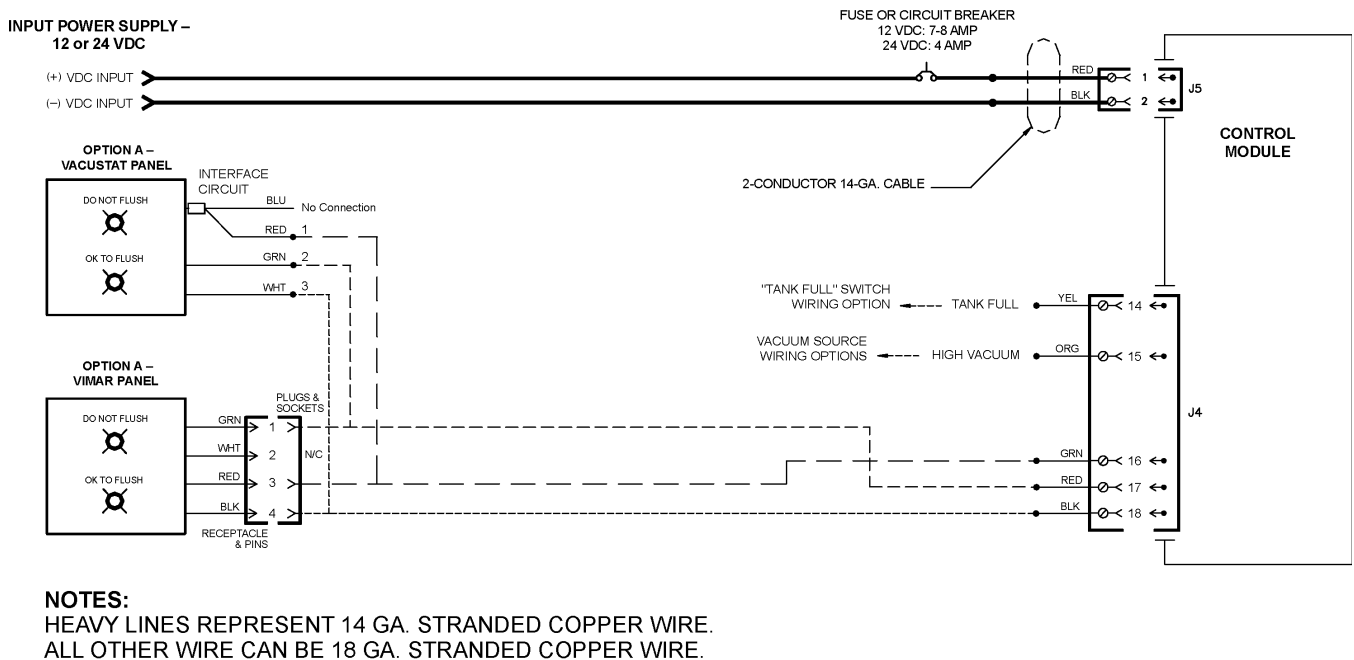


MARINE WIRING DIAGRAMS

MARINE VACUFLUSH STATUS PANEL / TANKWATCH OPTION

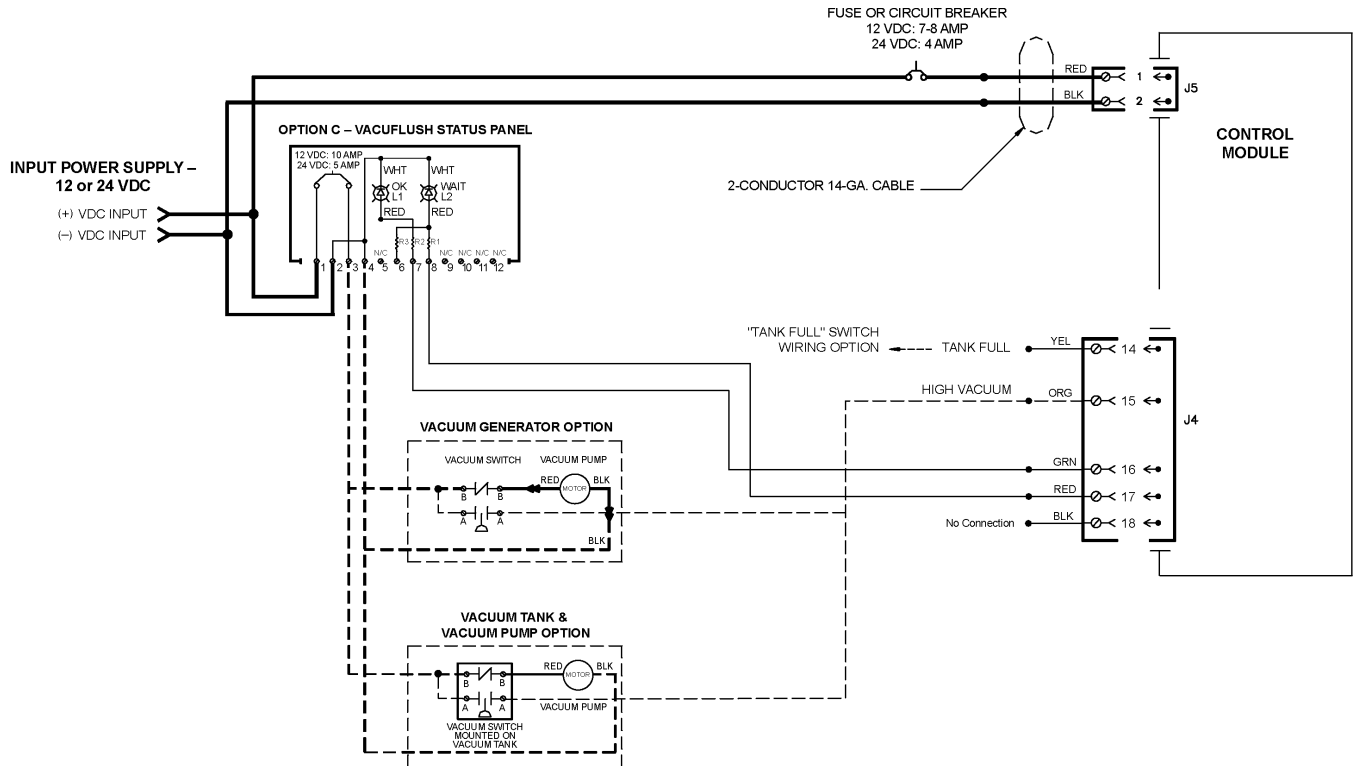


MARINE VACUSTAT PANEL OPTION



MARINE WIRING DIAGRAMS (cont'd)

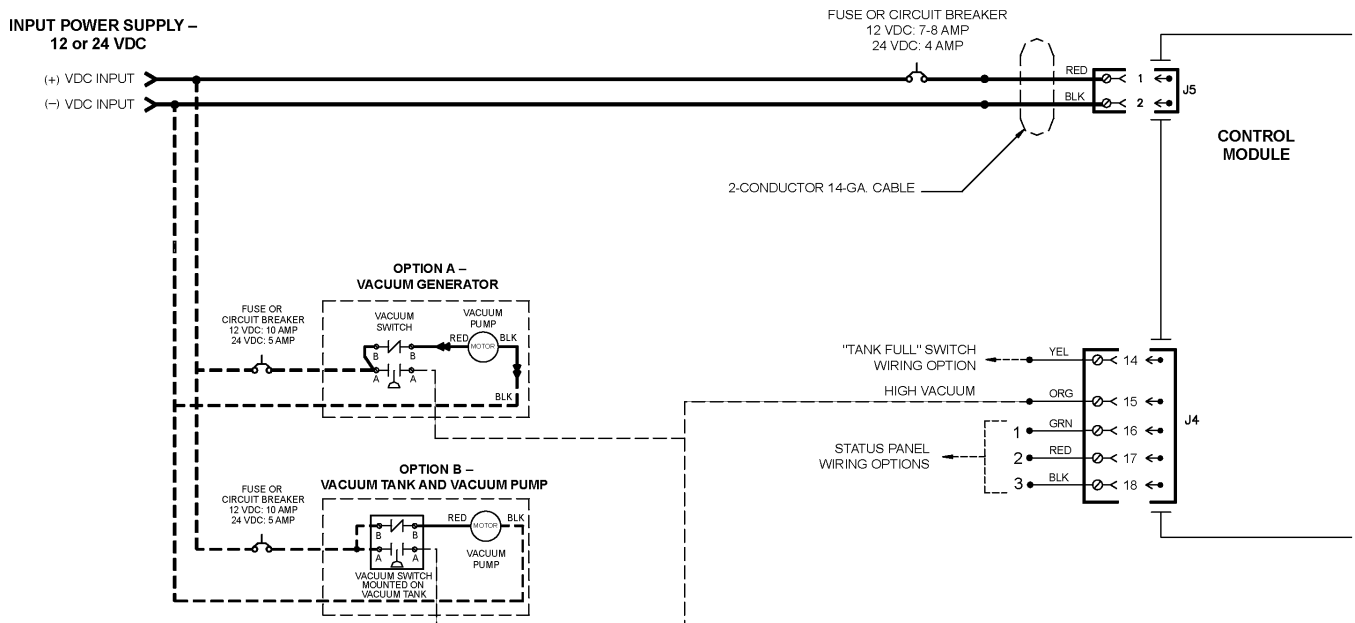
VACUFLUSH STATUS PANEL OPTION



IMPORTANT: ORANGE WIRE ON PIN 15 OF CONTROL MODULE MUST BE CONNECTED TO THE "A" TERMINAL OF THE VACUUM SWITCH REGARDLESS OF WHICH VACUUM SOURCE IS USED.

NOTES:
 HEAVY LINES REPRESENT 14 GA. STRANDED COPPER WIRE.
 ALL OTHER WIRE CAN BE 18 GA. STRANDED COPPER WIRE.

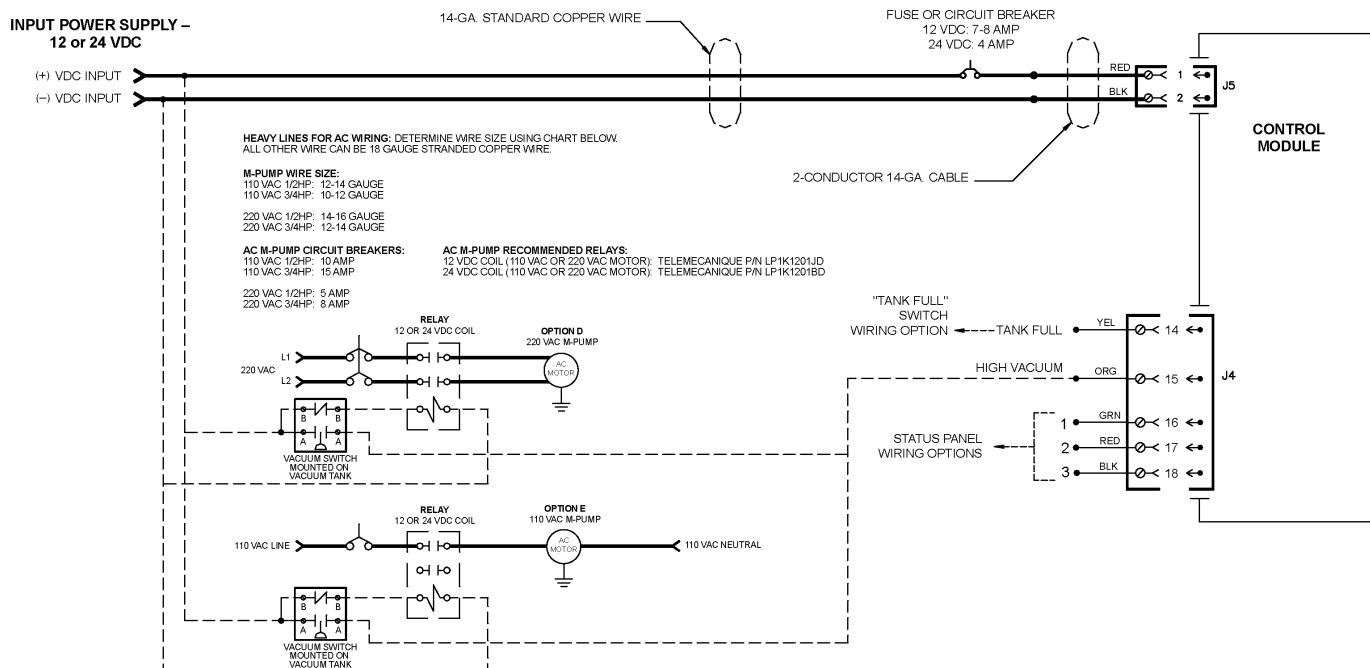
VACUUM GENERATOR/VACUUM TANK AND PUMP OPTION



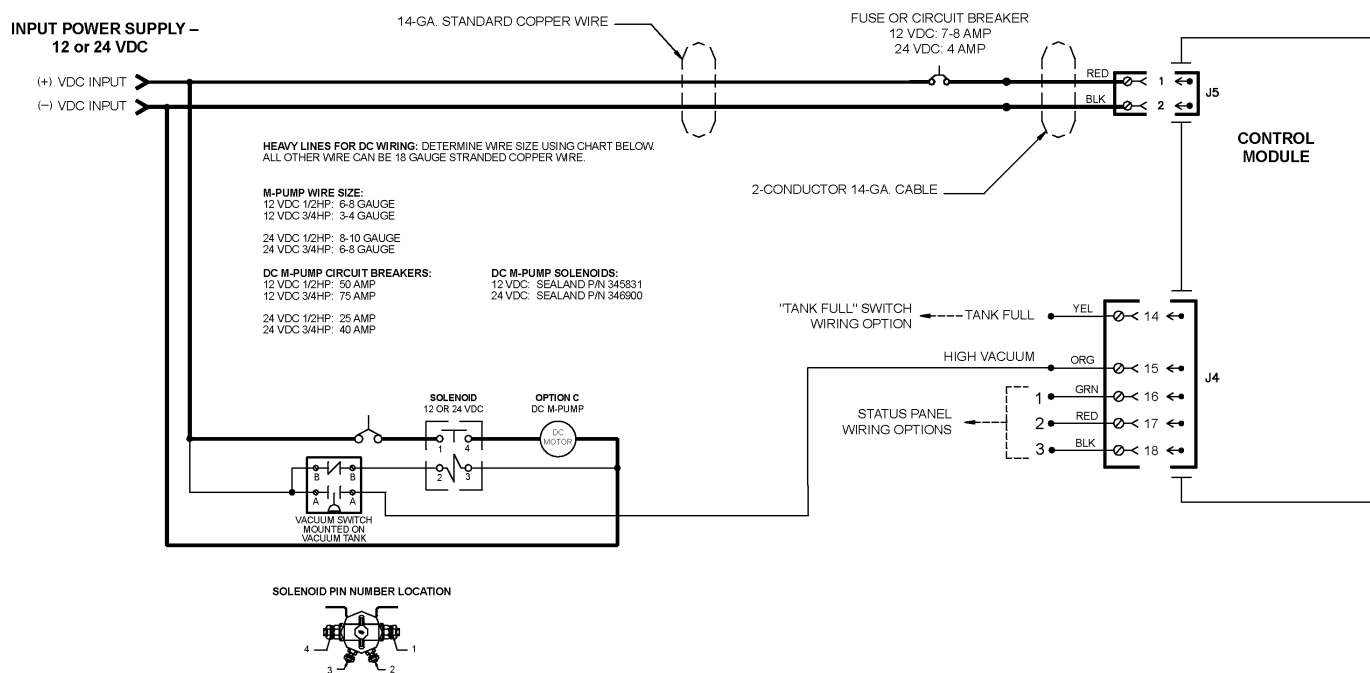
NOTES:
 HEAVY LINES REPRESENT 14 GA. STRANDED COPPER WIRE.
 ALL OTHER WIRE CAN BE 18 GA. STRANDED COPPER WIRE.

MARINE WIRING DIAGRAMS (cont'd)

M-SERIES VACUUM PUMP AC CIRCUIT OPTION

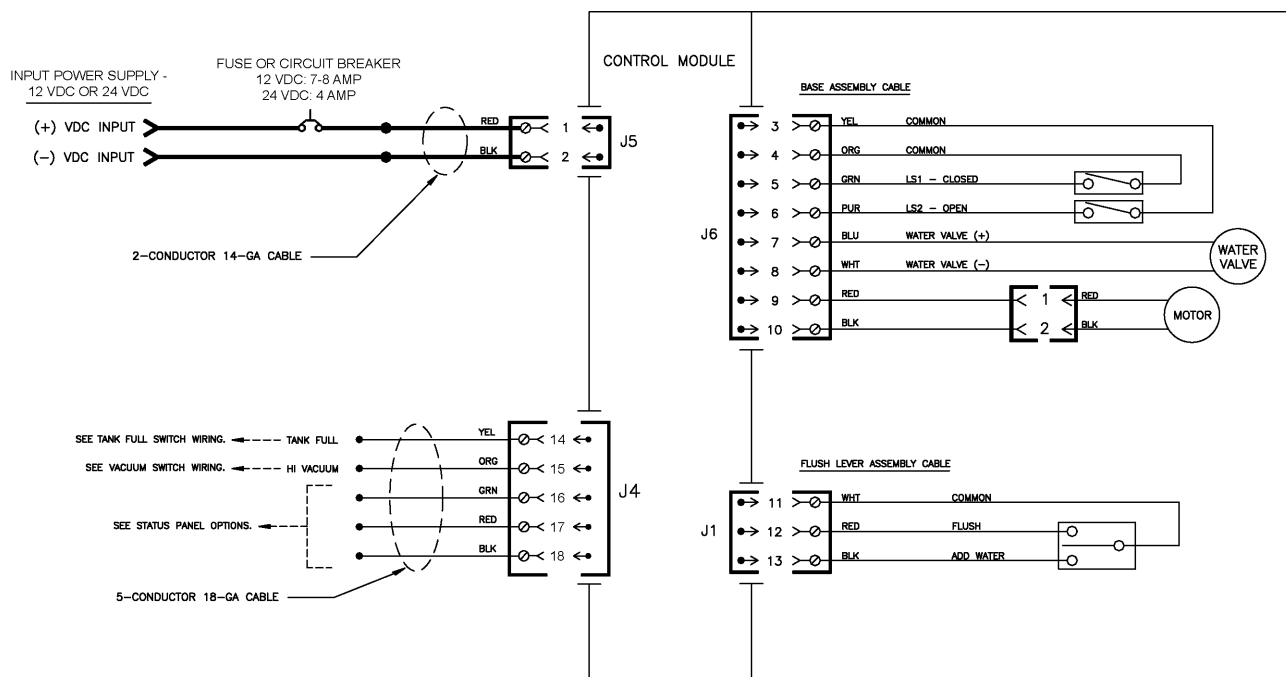


M-SERIES VACUUM PUMP DC CIRCUIT OPTION

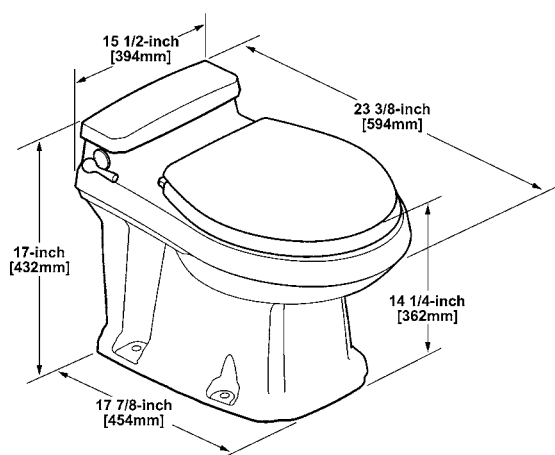


MARINE WIRING DIAGRAMS (cont'd)

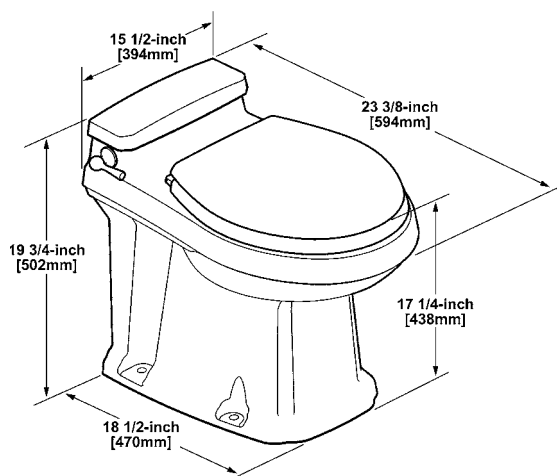
MARINE TOILET DIAGRAM



DIMENSIONS



Model 3006



Model 3048

China toilet
dimensions
may vary
±3/8-inch
(10mm).

CUSTOMER SERVICE

There is a strong, worldwide network to assist in servicing and maintaining your sanitation system. For the Authorized Service Center near you, please call from 8:00 a.m. to 5:00 p.m. (ET) Monday through Friday. You may also write us at Dometic Corp., P.O. Box 38, Big Prairie Ohio 44611.

Telephone: 1 800-321-9886 U.S.A. and Canada
330-496-3211 International

You may also contact or have your local dealer contact the Parts Distributor nearest you for quick response to your replacement parts needs. They carry a complete inventory for the SeaLand product line.

Fax: 330-496-3097 U.S.A. and Canada
330-496-3220 International

U.S.A. MASTER SANITATION DISTRIBUTORS

U.S.A. – North Central (IL, IN, KY, MI, OH)

Midwest Marine Supply
24300 Jefferson Ave.
St. Clair Shores, MI 48080
Tel: 586-778-8950
800-860-1540
Fax: 586-778-6108
E-mail: midwestmarine@yahoo.com
Contact: Bob Kennedy

U.S.A. - Northeast (CT, DE, DC, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV)

Northeast Marine Sanitation
69 Florida Street
Farmingdale, NY 11735
Tel: 631-752-7606
800-352-4323
Fax: 631-752-7615
888-283-7606
E-mail: northeast@northeast sanitation.com
Contact: Mike Starito

U.S.A. - Northwest (AK, ID, MT, OR, WA, WY)

Marine Sanitation, Inc.
1900 N. Northlake Way, Suite 121
Seattle, WA 98103
Tel: 206-633-1110
800-624-9111
Fax: 206-633-0317
E-mail: marinesan@mindspring.com
Contact: Ric Kolb

U.S.A. - South Central (AR, KS, LA, MO, MS, NM, OK, TX)

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P.O. Box 349
2301 Nasa Road #1
Seabrook, TX 77586
Tel: 281-474-3276
800-767-7606
Fax: 281-474-2714
E-mail: rsmiller@aersupply.com
Contact: Richard Miller

U.S.A. - Southeast (AL, FL, GA, NC, PR, SC, TN, VI)

Environmental Marine
111 S.W. 23rd Street, Suite A
Fort Lauderdale, FL 33315
Tel: 954-522-2626
800-522-2656
Fax: 954-522-5152
E-mail: info@environmentalmarine.com
Contact: John or Jill Hopkins

U.S.A. - Southwest (AZ, CO, NV, UT, CA-south)

Ardemco Marine Specialties
778 West 17th Street
Costa Mesa, CA 92627
Tel: 949-722-7672
800-253-0115
Fax: 949-642-9582
E-mail: ardemco@earthlink.net
Contact: Rick Glasser

U.S.A. – Upper Midwest (IA, MN, NE, ND, SD, WI)

PowerHouse Marine
518 Logan
La Crosse, WI 54603
Tel: 608-784-9580
888-752-4539
Fax: 608-784-8422
E-mail: dave@powerhousemarine.com
Contact: Dave Tucker

U.S.A. – Northern California

Fox Marine
2250 Zanker Road, Unit D
San Jose, CA 95131
Tel: 408-451-9055
800-826-2873
E-mail: foxmarco@pacbell.net
Contact: Charlie Barker

CANADA MASTER SANITATION DISTRIBUTORS

Canada - East

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12-A Leslie Street
Toronto, Ontario M4M 3H7
Tel: 416-465-1668
888-764-1111
Fax: 416-465-2098
E-mail: info@eastmar.com
Contact: Paul Gales

Canada - West

Western Marine Company
1494 Powell Street
Vancouver, BC V5L 5B5
Tel: 604-253-7721
800-663-0600
Fax: 604-253-2656
800-663-6790
E-mail: sales@westernmarine.com
Contact: Bill Falk

INTERNATIONAL SEALAND SANITATION SYSTEM DISTRIBUTORS

Call 1-800-321-9886, email us at sealand@dometicus.com, or visit www.dometic.com for the distributor nearest you.

ONE-YEAR AND TEN-YEAR LIMITED WARRANTIES – BOATS

Dometic Corporation warrants, to the original purchaser only, that this Magnum Opus® vacuum discharge toilet, if used for personal, family or household-like purposes in a boat, and if installed according to Dometic's recommended procedures, is free from defects in material and workmanship for a period of one (1) year from the date of purchase.

Dometic also warrants, to the original purchaser only, that the ceramic portion of the toilet bowl will not discolor, stain, scratch or craze for a period of ten (10) years if used for personal, family or household-like purposes, and is regularly cleaned as described in the product's owner's manual.

If this Dometic product is placed in commercial or business use, it will be warranted, to the original purchaser only, to be free of defects in material and workmanship for a period of ninety (90) days from the date of purchase.

Dometic reserves the right to replace or repair any part of this product that proves, upon inspection by Dometic, to be defective in material or workmanship. All labor and transportation costs or charges incidental to warranty service are to be borne by the purchaser-user.

EXCLUSIONS

IN NO EVENT SHALL **DOMETIC** BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR DAMAGES RESULTING FROM IMPROPER INSTALLATION, OR FOR DAMAGES CAUSED BY NEGLIGENCE, ABUSE, ALTERATION, OR USE OF UNAUTHORIZED COMPONENTS. THIS INCLUDES FAILURES WHICH MAY RESULT FROM NOT FOLLOWING THE WINTERIZATION OR CLEANING PROCEDURES AS DESCRIBED IN THIS MANUAL. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, ARE LIMITED TO A PERIOD OF ONE (1) YEAR FROM DATE OF PURCHASE.

IMPLIED WARRANTIES

No person is authorized to change, add to, or create any warranty or obligation other than that set forth herein.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from the date of purchase for products used for personal, family or household-like purposes, and ninety (90) days from the date of purchase for products placed in commercial or business use.

OTHER RIGHTS

Some states do not allow limitations on the duration of an implied warranty, and some states do not allow exclusions or limitations regarding incidental or consequential damages; so, the above limitations may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

To obtain warranty service, first contact your local dealer from whom you purchased this product.

THREE-YEAR AND TEN-YEAR LIMITED WARRANTIES – RECREATION VEHICLES

Dometic Corporation warrants, to the original purchaser only, that this Magnum Opus® vacuum discharge toilet, if used for personal, family or household-like purposes in a recreation vehicle, and if installed according to Dometic's recommended procedures, is free from defects in material and workmanship for a period of three (3) years from the date of purchase.

Dometic also warrants, to the original purchaser only, that the ceramic portion of the toilet bowl will not discolor, stain, scratch or craze for a period of ten (10) years if used for personal, family or household-like purposes, and is regularly cleaned as described in the product's owner's manual.

If this Dometic product is placed in commercial or business use, it will be warranted, to the original purchaser only, to be free of defects in material and workmanship for a period of ninety (90) days from the date of purchase.

Dometic reserves the right to replace or repair any part of this product that proves, upon inspection by Dometic, to be defective in material or workmanship. All labor and transportation costs or charges incidental to warranty service are to be borne by the purchaser-user.

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OTHER RIGHTS

Some states do not allow limitations on the duration of an implied warranty, and some states do not allow exclusions or limitations regarding incidental or consequential damages; so, the above limitations may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

To obtain warranty service, first contact your local dealer from whom you purchased this product.



Dometic Corporation • Sanitation Systems

13128 State Rt 226, PO Box 38

Big Prairie, OH 44611

SeaLand Product Customer Service: 1-800-321-9886

(8:00 a.m. - 5:00 p.m. ET)

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OPERATING INSTRUCTIONS – 3100 SERIES VACUUM-DISCHARGE TOILET

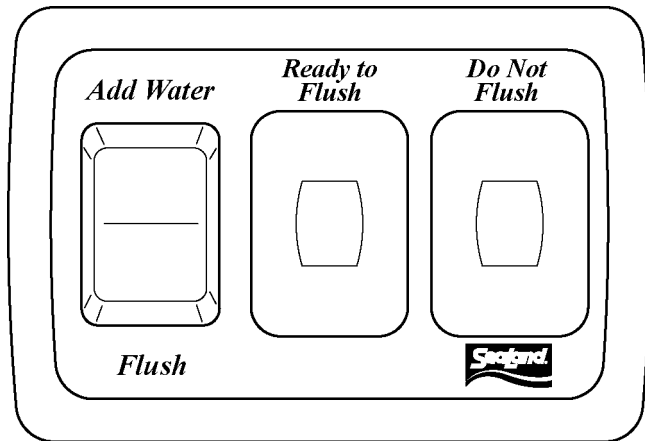
1. Adding More Water To Toilet Bowl

Push the "Add Water" switch until the desired water level is attained. To prevent overflowing the toilet, a timer inside the control module limits the amount of water that can be added.

2. Flushing The Toilet

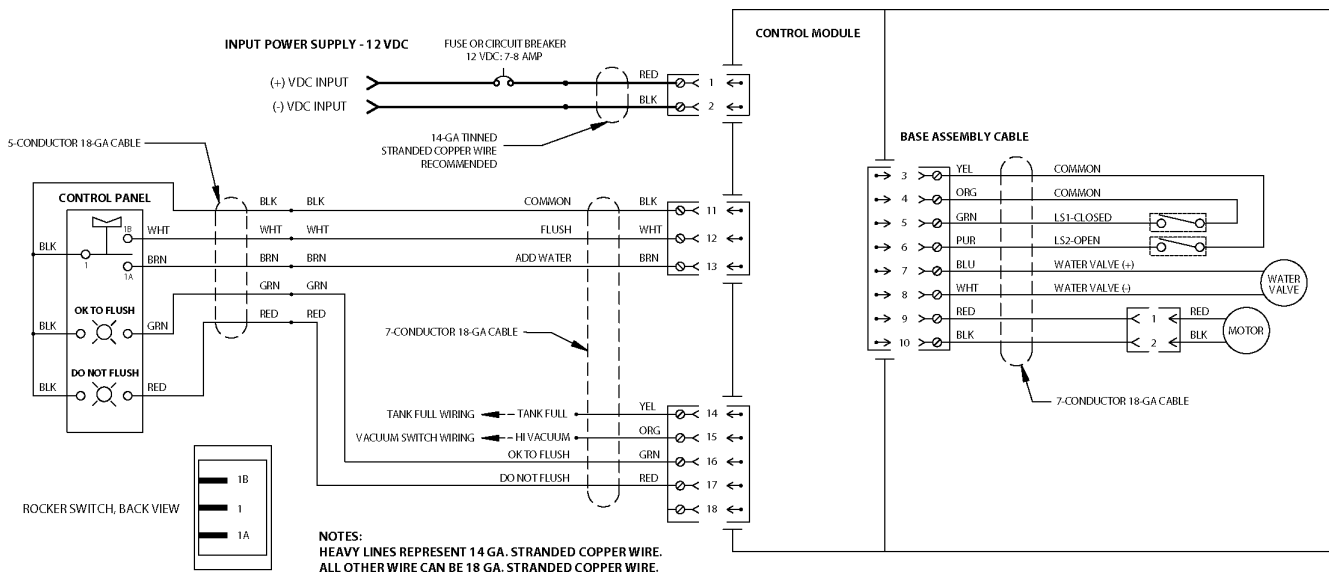
When the vacuum status panel's green "OK to Flush" light is on, and the red "Do Not Flush" light is off, press the "Flush" switch for a moment then release it. Holding the switch down will not prolong the flush cycle nor start a new flush cycle. The switch must be allowed to return to the "off" position and the vacuum must be allowed to recharge before another flush cycle can be initiated. A full holding tank will also prevent the toilet from flushing.

REMOTE VACUUM FLUSH SWITCH (3100 models)



The **Water Level Settings** and **Mode Switch settings** remain the same as 3000 series toilets (see page 4 of owner's manual).

WIRING DIAGRAM – 3100 VACUUM-DISCHARGE TOILET



Dometic Corporation • Sanitation Systems
13128 State Rt 226, PO Box 38
Big Prairie, OH 44611